



Climate change and food safety: An emerging issue with special focus on Europe

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Abstract:

According to general consensus, the global climate is changing, which may also affect agricultural and livestock production. The potential impact of climate change on food security is a widely debated and investigated issue. Nonetheless, the specific impact on safety of food and feed for consumers has remained a less studied topic. This review therefore identifies the various food safety issues that are likely to be affected by changes in climate, particularly in Europe. Amongst the issues identified are mycotoxins formed on plant products in the field or during storage; residues of pesticides in plant products affected by changes in pest pressure; trace elements and/or heavy metals in plant products depending on changes in their abundance and availability in soils; polycyclic aromatic hydrocarbons in foods following changes in long-range atmospheric transport and deposition into the environment; marine biotoxins in seafood following production of phycotoxins by harmful algal blooms; and the presence of pathogenic bacteria in foods following more frequent extreme weather conditions, such as flooding and heat waves. Research topics that are amenable to further research are highlighted.

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Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Policymaker, Researcher

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

Climate Change and Human Health Literature Portal

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Extreme Weather Event, Food/Water Quality, Food/Water Quality, Food/Water Security, Temperature, Other Exposure

Extreme Weather Event: Flooding

Food/Water Quality: Biotoxin/Algal Bloom, Biotoxin/Algal Bloom, Biotoxin/Algal Bloom, Chemical, Other Food Quality

Food Quality (other): heavy metals

Food/Water Security: Agricultural Productivity, Livestock Productivity

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified

